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## ABSTRACT

This report describes the general and specific objectives States have in their implementation of various ESEA programs and the management activities undertaken to achieve these objectives; and it evaluates the degree of success to which States have achieved their objectives. The report also highlights exemplary projects in the Title III program, examines anticipated needs for equipment and materials for schools, summarizes State objectives for 1973, and considers the administration of the program. Tables include data on the dollar expenditures for the program from fiscal year 1959 through 1972, the division of program expenditures by State and among specific subject areas, and the number of participants in the various programs. (Author/DN)

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STRENGTHENING INSTRUCTION  
IN ACADEMIC SUBJECTS

Title III, Part A, National Defense Education Act  
As Amended, Annual Report  
Fiscal Year 1972

U.S. DEPARTMENT OF HEALTH,  
EDUCATION, AND WELFARE  
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Office of Education  
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## 1. INTRODUCTION

Fiscal 1972 was the 14th year in which the title III, National Defense Education Act (NDEA), program supported the improvement of instruction through the purchase of equipment and materials and minor remodeling and through supervisory and related services provided by State departments of education. The program has experienced considerable growth, the number of eligible subjects increasing from 3 to 12. These subjects are: the arts, civics, economics, English, geography, history, the humanities, industrial arts, mathematics, modern foreign languages, reading, and science.

Beginning in 1968, funds totaling \$5,500,000 for supervisory and related services were deleted from the NDEA title III appropriation and added to that of title V of the Elementary and Secondary Education Act - ESEA (grants to strengthen State departments of education). (Administration of NDEA title III continued to be funded through an appropriation of \$2 million in fiscal years 1968-72.)

The allotments to States under NDEA for fiscal years 1959-72 are tabulated on the following page.

NDEA is a matching program. The Federal share is up to one-half of the expenditures for acquisition of equipment, materials and minor remodeling, and for administration of the State plan.

Section 303(a)(2) of the National Defense Education Act of 1958, and the Title III Regulations, require the State plan to develop principles for determining the priority of projects to be approved in the order determined by the application of such principles, which should reflect the State's consideration of:

- The State's educational goals

- The total general educational need in the critical subjects under title III

- Special instructional needs which title III may serve in a State

- The special requirements for equipment and facilities in each of the subject fields and the grade levels to be served

- The categories of eligible equipment, materials, and type of minor remodeling allowable and the State standards developed to enhance instructional programs.

These priorities form the general bases for the NDEA title III acquisitions program.

Allotments for equipment, materials; minor remodeling;  
administration of the State plan; and loan programs  
under NDEA title III: Fiscal years 1959-72

Fiscal year	Equipment, materials, minor remodeling	Administration of the State plan <u>1/</u>	Loan program
1959	\$49,280,000	\$1,350,000	\$ 6,720,000
1960	52,800,000	4,000,000	7,200,000
1961	47,520,000	3,750,000	6,480,000
1962	47,520,000	3,750,000	6,480,000
1963	47,520,000	3,750,000	6,480,000
1964	42,512,952	3,365,070	6,480,000
1965	69,992,500	4,619,215	9,600,000
1966	78,637,010	6,831,163	10,800,000 <u>1/</u>
1967	79,200,000	8,980,000	10,800,000
1968	75,240,000	2,000,000	1,000,000
1969	75,240,000	2,000,000	1,000,000 <u>2/</u>
1970	34,679,000	2,000,000	500,000
1971	47,500,000	2,000,000	500,000
1972	47,750,000	2,000,000	250,000

1/ Until fiscal year 1968, State supervisory and related services were supported in addition to administration.

2/ Beginning in 1969, the loan program funds were no longer allotted by States, but administered as a total amount for the United States.

The loan program provides funds at a reduced rate of interest to private nonprofit schools for the same purposes as the acquisitions program for public schools - strengthening instruction through equipment, materials and minor remodeling. For fiscal year 1972, the interest rate was 6 5/8 percent.

This report for fiscal year 1972 is derived from the narrative reports submitted by each State department of education to the U.S. Office of Education. Examples from States of program activities are arranged in the order of five geographic regions of the United States - Northeast, Southeast, Upper Midwest, Midcontinent, Western.

## 2. PROGRAM OBJECTIVES

Program objectives for the administration in fiscal year 1972 of NDEA title III-A were of two kinds. A majority of States formulated general objectives which usually included strengthening instruction in the academic subjects by assisting local education agencies to acquire equipment and materials, improving supervisory and related services, conducting needs assessment, and improving evaluation procedures. A few States cited specific priorities among the academic subjects. Maine, for example, gave highest priority to reading and ecological problems in relation to science and social studies.

Pennsylvania developed objectives for each of the academic subjects. The following objectives for science were formulated by science specialists in the Pennsylvania State Department of Education:

1. To develop scientific literacy in a society of rapid technological change
2. To give major emphasis to the process of science
3. To develop an understanding of basic, significant concepts of modern life
4. To identify and develop special aptitudes in science.

New Jersey formulated broad goals, e.g., maximizing educational services directed toward the urban and rural economically disadvantaged, and then cited specific management objectives which would assist the State Department of Education in helping local education agencies to accomplish the goal. For example, to provide better educational services for the economically deprived, the objectives included the provision of special NDEA title III-A grants to school districts in the Model Cities areas and to rural districts, and conducting eight filmmaking seminars in these districts during fiscal year 1972.

All Southeastern States reported general program objectives intended to provide guidelines for the effective operation of the NDEA title III program, such as:

Assisting local education agencies in the evaluation of existing instructional programs so that emerging needs might be identified and met.

Assisting in the coordination of services of other agencies related to instruction in planning and administering projects.

Providing the supervisory and related services necessary to insure the maximum use of materials and equipment purchased in accordance with the provisions set forth in the various State plans.

Priorities most mentioned were those related to individualized instruction. Alabama, Georgia, Maryland, Mississippi, North Carolina, Puerto Rico, Tennessee, and Virginia specified that projects should involve equipment and material designed for use by individual students or small groups. Florida, Kentucky, Maryland, and Tennessee stated that related workshops and in-service training should play an important part in project development and administration.

Mississippi and West Virginia reported specific subject matter objectives. Instructional television programing in the elementary schools in Mississippi, initiated in 1970-71, is supported directly by NDEA title III program objectives, as is environmental education, in addition to the more traditional areas.

The prevalent objective of the Upper Midwest State departments of education for fiscal year 1972 was to effect improvement of instruction in the 12 critical academic subjects. North Dakota planned to implement this objective by (1)encouraging the local school districts to create a more stimulating and attractive climate for learning through acquisition programs which will provide sufficient quantities of proven and basic equipment for both teacher and student use; (2)identifying, for the participating local education agencies, types of programs to meet the needs of the slow learner, to provide a foundation for career education and college preparation; (3) providing technical assistance to local school districts beginning new construction or remodeling; (4)developing curriculum guides to assure minimum standards for content in the critical subject areas; (5)working with institutions of higher education in the development of teacher training programs for media utilization; and (6)providing monitoring of all phases of local education agency projects as well as participating in evaluation activities of the North Central Association.

Most States of the Midcontinent report the following objectives: encouragement of local schools to develop projects supporting improved instruction, technical assistance in developing projects, distribution of funds, and curriculum development.

Objectives from Colorado require NDEA title III projects to be related to educational priorities established by the State Board of Education.

Emphasis on humanizing education, promoting a systems approach to implementing program objectives, integration of title III efforts with other Federal programs, promoting integrated media subsystems for groups of selected districts, and utilization of media coordinators were included in Utah objectives.

One of Arkansas' objectives was the development of plans for more effective cooperation between general supervisors and subject area specialists within the Division of Instructional Services. Examples of areas of increased cooperation are needs assessment, planning, implementation, monitoring, evaluation, and dissemination.

Alaska's NDEA title III and ESEA title II program objectives for fiscal year 1972 were identical, since the two programs are operated jointly in the State. The objectives, listed in the order of priority, were: to encourage public elementary schools to initiate or expand programs designed to meet the needs of specific groups of children in the lower elementary grades; to do the same in the upper elementary grades; and to initiate or expand special curriculum programs such as selective English or social studies, independent study, special reading programs, Biological Sciences Curriculum Study, Introductory Physical Science, or other national curriculum programs. The Bureau of Indian Affairs also had curriculum-related objectives: to assist schools in changing curriculums or methodology, and to assist small schools in rural settings to enrich their curriculums.

One of Washington State's program objectives was to aid school districts in acquiring appropriate safety equipment for shops and laboratories. The Trust Territory of the Pacific Islands used part of its funds to introduce an industrial arts project in Yap, and for a minor remodeling project at Chalan Kanoa Elementary School in which high school shop classes were given on-the-job training in industrial arts. Guam and American Samoa, like the Trust Territory, received the lowest basic amount of acquisition and minor remodeling funds. They both chose to develop centers for efficient circulation of certain types of materials and audiovisual equipment. Guam's program objectives for the year dealt with selection, processing, and circulation of audiovisual software, especially 16mm films, for children and teachers in schools through their Learning Resource Center. American Samoa's allotment was similarly devoted in its entirety to provision of audiovisual materials and equipment through the development of a Media Resource Center.

### 3. MANAGEMENT ACTIVITIES UNDERTAKEN TO ACHIEVE OBJECTIVES

Management activities undertaken to achieve the objectives formulated in each State for the administration of NDEA title III-A include project development, review, monitoring, and reporting, or all activities related to the granting of funds to local school districts from the inception of a project to a final report of the activities conducted.

All States reported the preparation of guidelines and forms which explain the purpose of the program and project application procedures. Conferences and field services for project planning are provided by State department of education staff, including guidance in the evaluation and selection of materials and equipment. In Maine, the standards for equipment and materials were revised and sent to each local education agency, along with an administrative letter outlining new State priorities. New York reported that a total of 20 man-days were expended conducting 10 planning workshops serving 775 participants.

State departments of education also reported attention to procedures for receiving, reviewing, and approving NDEA title III-A projects. In

Massachusetts, State education agency staff with significant background and experience in the academic subjects formed a task force to review and rate project applications. Projects with the greatest potential for accomplishing program objectives were approved and the entire allocation of \$979,895 encumbered.

A number of States reported that staff limitations prevented extensive monitoring; however, projects were monitored to the extent possible. In Vermont, for example, the part-time staff includes a director of learning services, Federal program coordinator, secondary education specialists, and consultants in art/music, industrial arts, and the humanities. In 1972, 270 projects were funded and an additional 213 from fiscal year 1971 carryover funds. This almost doubled the monitoring requirement for fiscal year 1972 and the staff was unable to monitor all projects.

The inability to maintain continuous oversight of projects through systematic onsite visits required several States to rely heavily on written reports from local education agency staff describing project activities, expenditures, and accomplishments. Connecticut, Delaware, and Rhode Island were among States noting that reports from local projects are increasingly written in terms of goals and objectives, target groups of pupils, and procedures for evaluation. Such projects lend themselves more readily to reporting measurable change in pupil growth and teaching methods, resulting in vastly improved reports.

In an attempt to improve management activities, Florida undertook a revision of NDEA title III State standards. The standards were reviewed and suggestions for revision sought from State department of education subject area specialists and fiscal officers, and from local personnel. A draft revision synthesizing the proposed suggestions was reviewed by selected State and district personnel, corrected, and published. A new application form was developed which allows a maximum of flexibility in designing projects to meet local needs. Kentucky has an advisory council which reviews all aspects of program and management activity. Criteria for project approval mandate to local districts that each project contain a measure by which the contribution to the goal of improving instruction may be validated. Supervisors in their field trips do followup studies. Maryland requires that all projects be reviewed in regard to their compatibility with the existing long-range plans submitted by the local education agency. In North Carolina, the NDEA title III coordinator collaborated with the title III accountant in the preparation of a brochure that emphasized the contributions made by title III to the instructional program in North Carolina public schools. These brochures were sent to all North Carolina superintendents, members of the North Carolina congressional delegation, and other appropriate Senators and Representatives. In West Virginia three basic functions were performed by the State Department of Education that encourage local participation in the design of curriculum improvement. They are:

Assisting local agencies with the Comprehensive Educational Program,  
the basic State program in West Virginia, consisting of evaluation  
and plan for improvement

Incorporating evaluation into State plans for Federal programs

Sponsoring inservice meetings, many of which are devoted to development and improvement of curriculum guides and materials.

During this past year in the Upper Midwest States a great deal of time was spent in developing guidelines, procedures, and criteria for administering special projects. Wisconsin conducted a workshop for 160 individuals from schools which filed an intent to apply for a special project. One hundred and twenty-seven projects requesting nearly \$1 million came forth. Forty-eight were selected with the help of outside subject specialists.

In order to implement Priority III in the revised State Plan, Michigan identified 182 school districts as having critical educational need. Critical educational need is determined when a district's mean score in composite achievement is below the 25th percentile in a ranking of all school districts in the State. These districts in addition were required to: adopt a set of educational goals in response to the State Board of Education's proposed State Common Goals; identify performance objectives in the cognitive domain; conduct a local student needs assessment; and determine what equipment and materials were required to meet unmet student needs.

Assistance in project development was often given onsite by the critical subject area consultants who were also able to advise about new approaches, new materials, and equipment.

Review of special project applications utilized outside reviewers in addition to State department of education personnel. Wisconsin reported that 22 outside consultants assisted NDEA specialists in evaluating the 127 special project applications from which 48 were selected.

In the States of the Upper Midwest the subject area consultants monitored the projects in conjunction with their program assistance visits to the local education agencies. Title III staff made onsite visits principally to clarify administrative details. In Iowa and Illinois a team of 15 subject-area consultants and program administrators visits projects as a part of the accreditation process. Reports of these visits point out the strengths and weaknesses and recommend needed changes. These reports usually serve as a base from which local education agency planning is begun.

Several States, including Indiana, are developing departmentwide management information systems to permit a more structured and accurate method of evaluating and reporting the results of NDEA title III projects in the State.

In New Mexico, high priority was given projects recommended by State Department of Education representatives and designed by local and State personnel to correct problem areas revealed or emphasized by State evaluation procedures.

Workshops to assist local agency personnel in writing projects for titles I, II, and III of ESEA and title III of NDEA were conducted in Idaho. Special

attention was given to needs assessment, objective writing, evaluation, and dissemination.

As in most States, State supervisors in Montana held numerous conferences with individuals and local agencies to provide technical assistance with project development. At these conferences State supervisors encouraged the coordination of NDEA title III projects with other Federal programs in a manner that would enhance the educational goals of the local agency as well as those given high priority by the State Superintendent of Public Instruction.

Alaska held a proposal writing workshop at which technical assistance was provided. State staff reviewed and ranked all applications received in the order of the priorities which had been established and disseminated early in the school year to all districts. Projects were funded in rank order until all moneys were exhausted.

The department staff of Washington State placed major stress with local applicants on the use of title III funds to support individualized educational programs. While assisting local school personnel in the developmental stages, staff emphasized repeatedly that requested items should specify how they would help meet identified learner needs and support instructional procedures.

Workshop activities undertaken by the State agency Learning Resources staff to assist teachers in identifying and selecting solutions for educational problems within their districts were significant. Participating teachers and administrators not only were helped to develop solutions for program needs but were also offered ways to rephrase problem solutions in terms of unmet individual student needs. Under NDEA title III, Learning Resources staff used a variation of the Instructional Development Institute system, one of several such problem-solving strategies used during the year by State staff to help build teacher competencies.

Supported by State legislation governing safety equipment for shops and laboratories, State office staff placed increased emphasis upon helping districts identify and obtain appropriate materials and equipment, primarily during project development and application review activities.

#### 4. DEGREE OF SUCCESS IN ACHIEVING PROGRAM OBJECTIVES

State departments of education reported a fair degree of success in attaining objectives for the NDEA title III-A program in fiscal year 1972; however, the degree of success in attaining the objectives was based chiefly on the subjective judgment of experienced supervisory personnel rather than on formal evaluation.

New Jersey reported the following information concerning achievement of objectives in each of the academic subjects:

- Science- Curriculum surveys indicate that NDEA title III-A funds stimulated local districts to evaluate existing science courses and redirect them to increase their effectiveness.
- Mathematics- State consultants report that the availability of better materials and equipment has had a favorable effect on teacher attitudes. There is a definite increase in the use of audiovisual equipment and materials in mathematics instruction.
- Modern foreign languages- Interdisciplinary courses in foreign languages have been introduced. Purchases of equipment and materials have permitted the installation of individually paced programs of instruction.
- English and reading- A statewide media language conference to demonstrate new ways of using media in language arts instruction was attended by 300 teachers.
- History- The social studies consultants report the increasing introduction of ethnic studies into the social studies curriculum in New Jersey schools.
- Art- Art consultants have worked with staff of all 4-year colleges in the State to develop a core curriculum in art education.
- Humanities- Thirty school systems have created and expanded interesting new humanities programs and acquired \$220,700 worth of equipment and materials to improve the educational experience.
- Industrial arts- The 134 projects funded in this field in 1972 enabled many school districts to experiment with and initiate innovative programs. The purchase of new tools and equipment exposed pupils to a greater variety of industrial arts activities.

An excerpt from the New York report indicates the impact of NDEA title III-A in that State:

The objective to provide the variety, quantity, and quality of learning resources of a supplemental nature was achieved to a high degree in relation to the funds available. Three hundred ninety-one projects

were funded, including 105 unigrants. The unigrants were interdisciplinary projects, funded under NDEA title III-A and ESEA title II to establish or improve indepth learning resource centers. The diversity and quantity of learning resources made available contributed significantly to program enrichment especially in providing for the specific needs of individual learners. Participation in the NDEA title III-A program has facilitated the enrichment of the instructional program by providing the impetus for implementing such educational strategies as flexible scheduling, short- and long-range curricular and instructional planning, and the development of individual learning activities.

In South Carolina, the acquisition of additional materials and equipment as made possible with title III funds aided in the accreditation of 81 percent of the State's elementary and middle schools, representing a total of 661 schools. This represents an increase of 5 percent over the number accredited in 1970-71. The secondary school accreditation level also has increased substantially during the past school term. Mississippi is able to report that in the area of educational television, four transmitting stations were activated during 1971-72 with a fifth ready to be activated. These stations, together with the two providing broadcast coverage during the previous year, will provide broadcast coverage for approximately 90 percent of the State, leaving only a small area in northeast Mississippi to be covered by the eighth planned station.

In industrial arts, more than 75 percent of the school systems using title III funds either started new programs or expanded old ones, thereby increasing enrollment in these classes. It is stated by many teachers and school administrators that the attendance record of the industrial arts student was improved. Some of the positive observable results were:

1. Broader understanding of the industrial world
2. Motivation carried over into other areas of study
3. Evidence of greater interest and pride in school
4. Confidence gained in the use of common tools
5. Better-informed students
6. Proceeding and achievement on individual programs of work.

In 1968-69, development of reading skills was identified as the greatest instructional need. During 1972 these needs have dropped to fourth place. In Puerto Rico, in the objective which related to the design and production of instructional materials, 9,878 items (motion pictures, filmstrips, slides, transparencies, recordings, pictures, and other media) were produced. Some of the materials were organized into instructional packages. Facilities for the production of materials were improved at the school and district

level. Equipment for the storage of material at the regional level was acquired so as to improve the circulation and distribution of films. During the year, 11,998 16mm films circulated among the schools. In the 102 centers established throughout the island, materials and equipment circulated among teachers and supervisors.

Upper Midwest States reported that, in the main, improvement in instruction was effected through the acquisition programs which provided necessary equipment and materials. Reactions from several local education agencies in Nebraska are:

In summary, there is no doubt that audiovisual equipment played a major role in raising first-of-the-year reading comprehension scores and vocabulary scores. One student wrote, in an evaluation of the reading program, "This is the best year I've had in school. I don't like books much yet, but I don't hate them. I like to use the electrical equipment. I used what I learned in other classes too."

The students are more involved in "hands-on" activities. Their learning is reinforced tremendously by the use of these machines. This in turn has stimulated my interest in some areas and forced me to improve my qualifications by doing more research in areas such as metal machining.

We feel that this project had a great impact on the areas of materials, equipment, methods, and teacher preparation. The greatest single impact is simply that the teachers recognized the equipment was theirs and didn't have to be checked out or shared. They planned with the equipment in mind. This naturally changed teacher preparation and the methods used in the classroom.

Technical assistance to local schools during onsite visits was a major task of the subject area consultants. For example, Illinois industrial arts consultants made 464 visitations to schools regarding accreditation, curriculum, and title III.

Developing and distributing curriculum materials in such areas as industrial arts, modern foreign languages, science, art, music, and social studies was another major objective accomplished. A Wisconsin social studies specialist planned the development of a TV series called "Comparative Cultures" for use with sixth-grade classes via the State network. The mathematics curriculum guide for junior high school was produced and has been reprinted because of State and national demand.

Title III consultants in all Upper Midwest States reported reviewing college teacher education programs which resulted in improved or modified preservice programs for prospective elementary and secondary school teachers.

Workshops, conferences, and professional meetings for each of the subject areas were conducted with the assistance of the title III consultants. Twenty-nine foreign-language workshops were held in Illinois alone. Emphasis ranged from methodology and Spanish and French proficiency to writing performance objectives.

Most States were able to report high participation in the program. Ohio approved projects for 667 school districts, with only 8 school districts not electing to participate; also, 67 eligible agencies applied for and received special project funds. Hence the State was able to achieve its objective for getting full participation and to process applications in a timely and efficient manner.

Typical of the wide variety of evidence cited by States of the Midcontinent region to substantiate success in achieving objectives is Utah's accomplishment in assisting local districts to determine instructional needs, develop procedures and strategies for meeting them, and provide better ways of evaluating results.

Oklahoma's objective to improve management by the State Department of Education and local schools in implementation of title III was successful to the extent that the management-by-objective system was introduced and used in 75 percent of the schools.

Of 16 NDEA title III projects approved in Alaska in fiscal year 1972, 4 initiated or expanded special programs attempting to meet the individual needs of students in the lower elementary grades. Three of the four projects concentrating on the early elementary grades were coordinated with other federally funded projects.

In verbal and written reports from Washington State, local school personnel indicated that greater emphasis was placed upon providing more student-centered activities than ever before, and examination of statewide equipment and materials purchasing patterns verified these findings. Examination of applications also showed that several school districts added essential items to their inventories of safety equipment for shops and laboratories. A survey of safety standards used in industrial arts and laboratory programs was used to identify districts that then were encouraged to use title III funds to bring their programs up to State standards.

Guam's objectives for its Learning Resource Center were all met. The Multi-Media Selection Team, after a 5-week training session of 2 hours per week, were able to complete the two performance tasks used as a measure of success. Learning Resource Center materials have been transferred to a data processing system for film circulation, and staff are fully trained in its use. The original total of 1,213 useable and up-to-date films has been increased 33 percent, primarily through trade-in of old films for new titles at discount and through quantity purchases.

## 5. EXEMPLARY PROJECTS

In fiscal year 1972, exemplary projects were funded under NDEA title III-A in each of the academic subjects. The projects are commendable in their efforts to utilize innovative teaching techniques and to offer to other schools excellent examples of interesting new curriculums and teaching strategies. They have introduced such new courses as ecology in biology, advanced courses in modern foreign languages, mathematics, and science, and integrated innovative units into traditional courses, e.g., film study in English.

The scope of NDEA title III-A assistance in inducing educational change is illustrated by the following examples:

Arts Appreciation- This project provides pupils in Pennsylvania's Midwestern Intermediate Unit IV with the opportunity to view exhibits of high-quality, original work of professional artists. Classroom study is directed toward the relationship of art with other areas of the curriculum.

Computer Assisted Instruction- A drill and practice routine for teaching mathematics permitting pupils to move at their own pace was installed in Clinton Place Junior High School, Newark, N.J. Teachers report a high degree of achievement in mathematics, better attendance, and improved pupil behavior and motivation.

French Program- Goffstown High School, Goffstown, N.H., offers a 6-year sequence of French. Many pupils will work in nearby French-speaking communities and efforts are made to tie the foreign-language program to other subject areas. A modern electronic language laboratory has been installed in the school.

Caswell Center is one of the nine Special Agencies in North Carolina that receive NDEA funds. This project is exemplary because it provided mentally retarded youngsters, in an institutional setting, an opportunity to participate in activities that had previously been denied them. Description of the project was:

An expansion of the arts and music program is being formulated to include more residential students. This expansion is to place greater emphasis on classroom activities that are determined by the interest and abilities of the students involved. The majority of these students are from economically and culturally different environments and have had little opportunity to develop the basic fundamental skills of the arts. Therefore, it is necessary to provide a wide variety of activities and experiences to broaden their scope of understanding.

A kiln and drying rack gave these students a chance to experiment with a medium (ceramics and clay) completely new to them. Musical instruments

such as melody bells, wrist bells, drums, sticks, and a piano enabled the music department to expand and serve some 40 trainable retarded students.

The art and music instructors at Caswell Center were asked if NDEA equipment and materials had been useful. Their reply was: "It (NDEA) has doubled our effectiveness and has had an immensely valuable effect of not only increasing the scope and size of these activities but also of greatly improving the quality of the total education experience at Caswell Center."

Berkeley County in the eastern Panhandle of West Virginia has initiated an industrial arts program in the elementary grades. The children participating will be actively involved in industrial arts subjects related to building, finishing, and repairing. In the past, activities of this nature were reserved for secondary students and for the most part a small minority of students. When in full operation, this program is expected to reach all students at some point in their elementary school years.

It is expected that the program will improve three basic items in the child's development. One is a measure of self-confidence in his ability to control muscular activity, thereby improving his self-image. A second is a very limited view of some aspects of the world of work or vocational alternatives. A third is skill in using proper tools for the purpose of reaching some end.

Whitefish Bay, Wis., High School used its own funds augmented by an NDEA special project grant to employ instructional technology in expanding learning opportunities. Using relatively simple and inexpensive hardware and installation procedures with Telephone Company cooperation, a sound distribution system was designed which utilizes 10 ordinary cassette recorders and 3 stereo tape players to deliver programs to the central Instructional Materials Center and 3 resource centers. The system is "open-ended," permitting easy extension to other areas, including classrooms, at a modest cost of about \$100 per room. The arrangement now carries audio messages only, but room was left in conduits for video cable, looking to the day when visuals as well as sound might be transmitted.

Students, using teacher assignments and indexes, dial desired programs into their headsets on 13 channels allotted to the system, enjoying very clear transmission and few technical difficulties.

Vehicles for the lessons are principally cassette recordings, but the network also permits transmission of signals from radio, record players, and reel-to-reel recorders. Students utilize 48 listening stations in the 4 centers, the 3 resource centers having been constructed from former study halls. The 4 areas provide space to handle in excess of 1,475 student listening-viewing hours per week required in courses like biology, chemistry, physics, music, Western civilization, Spanish, French, English, art, math, physical education, earth science, geography, Latin, and American studies.

On an experimental basis, some teachers at Whitefish Bay have grouped their classes for team teaching, operating on a 14-period modular schedule. The rest of the school is on a 7-period schedule. Stimulated by teacher assignments and their own curiosity, students utilize the recorded materials either during unstructured time or during study periods. Some are released from parts of class sessions to "look and listen." From October 1 to May 1, they logged a total of 18,971 hours at their headsets. Frequently, the assignments made include the viewing of filmstrips or slide-sets coordinated with the recorded "lessons"; hence at any given time, a student at one station may be found listening analytically (or just enjoyably) to "Scheherazade" while nearby another takes notes on the sound filmstrip program "DNA and Protein Synthesis."

Evaluation of both achievement and student-teacher reactions at all grade levels has been done during this 1st year to obtain base data needed to make assessments at the end of a 2d year. Already 1 group of 218 biology students surveyed for their reactions to the audiotutorial versus the teacher-directed procedures found 59 percent calling the A.T. approach the "most successful," 75 percent saying this procedure was more interesting and enjoyable, and 58 percent feeling their grades were better while they were involved in the A.T. activities. Many students revealed their appreciation of having repeated exposure to learning experiences, and one observed, "It's about time the 20th century has been brought into the school."

Adelbert Reitz, Whitefish Bay's media consultant who coordinates the project, observes that the teachers are generally enthusiastic toward the project once they become involved and learn a good deal themselves as a result of their involvement in production of programs. All of the audiotutorial exercises are locally made, while about 70 percent of the other programs are commercial products.

As a result of a study showing that over 60 percent of the students have listening facilities in their homes, some thought is being given to expanding the project to provide materials for utilization at home.

The total project cost \$8,592, of which \$3,780 came from NDEA title III.

The Waverly, Nebr., Public Schools used NDEA assistance in the acquisition of a computer. Their objectives were:

- a. A computer science course will be initiated in the high school in which the student will be introduced to a programable machine, will develop some of the logic theory behind the machine, and will have the opportunity to test his knowledge to the capacity of the machine.
- b. The machine will be used in an assistance role in the advanced algebra class. Students will use the machine as a calculator to check mathematical results with some fundamental programming involved.

- c. The students in the physics and chemistry classes will use the computer to (1) perform mathematical computations in solving complex science problems, which is especially important as many students lose interest in a problem because of the tedious mathematical calculations, and (2) do some fundamental computer programming.

In their evaluation report it was stated that students were able to:

- a. Program simple operations recalling and storing information.
- b. Use function keys incorporated in programming.
- c. Demonstrate their knowledge of branching or looping.
- d. Use subroutines, etc., to trim programs and reduce needless steps.
- e. Relate the above concepts to larger and more integrated computer systems.

Listed as examples of the type of programs with which students worked were:

Operations with complex numbers  
 Days of the week  
 Generating prime numbers in different bases  
 Confidence level for the true mean of a sample  
 Square root without square root key  
 Area under standard normal curve  
 Generating palindromes  
 Least common multiple  
 Range, mean, standard deviation, variance  
 Meters to yards conversion  
 Horizontal, vertical distance, total time of projectile given  
 initial velocity and angle.

In evaluating the second objective a record was kept of the voluntary use of the computer by subject area and type of problem. The time breakdown was as follows:

Computer science	38 percent
Chemistry and physics	19 percent
Mathematics	34 percent
Other classes	9 percent

Among the types of programs included were:

$$\frac{3}{1.2} + \frac{4}{2.3} + \frac{5}{3.4} + \frac{6}{4.5} + \dots + \frac{n}{(n-2)(n-1)}$$

$$1/3 + 3/5 + 5/7 + 7/9 + \dots + \frac{x-2}{x}$$

$$1 + (x-1) + \frac{(x-1)^2}{2} + \frac{(x-1)^3}{3} + \dots + \frac{(x-1)^y}{y}$$

$$n.(n+1) (n+2) (n+3) \dots (n+n)$$

$$x^1 + x^2 + x^3 + x^4 + \dots + x^y$$

In summary the evaluation stated:

Science teachers, mathematics teachers, and administrators are in agreement that the Computer Assistance Project was generally successful in meeting the objectives set for it. The availability of the computer proved to be a valuable addition to the mathematics and science program.

Title III funds were used in Midwest, Okla., to help provide equipment such as SCIS and SRA\* science kits, filmstrips, microscopes, microscope slides, models, and projectors which were used to develop an experience-based science program rather than a textbook-centered course.

A survey of seventh-grade students who had graduated from the new program and of ninth-grade students who had completed a textbook science course in the elementary school showed an increase in positive responses from 41 percent to 80 percent regarding enjoyment of elementary science; from 31 percent to 58 percent who liked their science textbooks; from 31 percent to 89 percent who liked the equipment used in elementary science; and from 40 percent to 96 percent for those who felt the equipment used in elementary science made science more enjoyable and interesting.

The High School for the Visual and Performing Arts, Houston Independent School District, Houston, Tex., is the first high school devoted entirely to the arts in the South and Southwest. Students are admitted through audition and portfolio. They are on an extended day schedule, and they complete college admission requirements in addition to specialized art courses. Academic courses are taught with a fine arts emphasis.

The High School for the Visual and Performing Arts draws on students from all sections of the school system. Students are selected on the basis of their interest in the fine arts and on their potential in this area. Italian has been added to the foreign languages curriculum because of its strong relationship to concert and operatic music. Classes in Italian place strong emphasis on both language and cultural dimensions.

A project rated very high according to Alaska's priorities is in two elementary schools in a large district. The program in one school is designed to meet the individual needs of pupils concentrated in kindergarten, first

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\*Science Curriculum Improvement Study, Science Research Associates.

grade, and in other grades 2-6 for disabled children and low achievers in the area of reading. The materials are used in the school media center by 35 classroom and support teachers in early learning for reading to develop oral competency, extend vocabulary comprehension, and develop memory span. The other school in the district used multimedia kits to teach science and mathematics to handicapped students in the special education unit. The handicaps and achievement levels of these pupils range widely, mandating an individualized program.

The Douglas Public School District #27, Cochise, Ariz., has a very high proportion of Mexican-American pupils. Improvement of reading is a major objective in the District schools. To help achieve this objective in the 12th Street Junior High School, an up-to-date media center was considered essential. NDEA title III funds were used for extensive remodeling of a former rifle range in the basement of the school into a media center, for installation of recessed lighting, construction of storage cabinets for the audiovisual equipment, and the acquisition of carrels, carpeting, and audiovisual equipment. ESEA title II funds paid for the paperback collection and other print and nonprint materials.

The Bureau of Indian Affairs gave a grant to Chemawa Secondary Boarding School, Chemawa, Oreg., for the development of a new program within the science area. The basic courses in the new program are taught under the general title of "Farming of the Future and Ecological Studies." The segment of studies related to future farming provides students with the opportunity to learn about soils and food production, fresh water and marine food sources, and hydroponic gardening. The ecological studies help students learn about plant and animal preservation, the production of game birds and fishes, and their relationships to the ecological balance. A bird/animal park refuge will be developed on the Chemawa campus. A small spring-fed stream will be dammed to provide a fresh water lake and marsh land, which is to be stocked with game fish for both study and recreation. The marsh will be a breeding/brooding area for birds. This reserve area will be fenced and seeded with the natural foods of the protected inhabitants. A hydroponic unit has been acquired to provide students with the opportunity to learn about many farming techniques for the future, and a marine aquarium and 10 small aquariums will also be acquired so that students can study marine animals and plants. Students will have many opportunities to work with their hands and with machinery as they actually build, equip, and maintain the new facilities. As they work with the various machines, they will learn the basic principles of machine operation, maintenance, and repair. NDEA title III paid for the hydroponic unit, the aquariums, and construction equipment.

## 6. MATCHING PATTERNS

Title III-A of NDEA is a matching program, i.e., local education agencies pay a share of the costs of projects approved by the

State departments of education and are reimbursed for the remaining amount with Federal funds. However, uniform reimbursement or payment is not required. State departments of education may provide a method by which the ratio of reimbursement to expenditures may be adjusted on the basis of comparative local needs. Table 1 shows the matching patterns of the States and other areas.

## 7. ANTICIPATED NEEDS FOR EQUIPMENT AND MATERIALS

Reports from State departments of education provide both subjective and objective evidence of current and anticipated statewide needs for specific types of equipment and materials which are considered essential in improving education in the academic subjects. Many NDEA title III-A coordinators noted the increasing involvement of schools in such emerging instructional strategies as individualized instruction, modular and flexible scheduling, interdisciplinary courses, cycle scheduling of exploratory courses, computer-aided instruction, case study instruction, and simulation and games teaching. Such methods and practices rely heavily on the immediate availability of abundant, well-selected materials and equipment. The need for larger quantities of materials and equipment in schools appears to be almost universal.

Pennsylvania conducted an excellent equipment and materials needs assessment during fiscal year 1972. The study provides objective evidence that schools lack sufficient instructional aids for classroom use. More than 59 percent of all schools were found to be deficient in equipment and materials needed in all subject areas and categories. Table 2 shows the percent of Pennsylvania schools falling below State standards in four areas and the estimated dollars needed to meet standards. The total estimated amount needed to provide sufficient laboratory, audiovisual, and other special equipment, and audiovisual and reference materials for Pennsylvania schools to meet State standards in the academic subjects is \$53.1 million. Needs appear particularly acute in industrial arts, the arts and humanities, mathematics, economics, and reading.

A more subjective comment on needs for equipment and materials is excerpted from the Vermont report:

The last major study of Vermont equipment needs was made in 1969. The basic needs (minimum standards) at the elementary level in the fields of modern foreign languages, social sciences, reading, and English were placed at \$1,040,000. Since 1959, approximately \$160,214 in Federal matching funds have gone to these five areas. It would appear that we are a long way short of meeting our needs in the academic subject areas. A needs assessment in reading is currently in progress.

The following information on needs for specific types of equipment and materials for use in the academic subjects was reported by Massachusetts:

- The arts- Reproductions, musical instruments, art supplies, stereo equipment, recordings, and tapes
- Civics- Microfiche readers, microforms, films, tapes, visuals, books, and pamphlets
- Economics- Books and periodicals
- English- Video and camera equipment, books, periodicals, pamphlets, films, and tapes
- Geography- Maps, globes, and visuals
- History- Original source materials, reprints, microfiche readers, and microforms
- The humanities- Films, visuals, books, pamphlets, and periodicals
- Industrial arts- Tools, graphic and electronic equipment
- Mathematics- Minicomputers, audiovisual and Cuisenaire materials
- Modern foreign languages- Language laboratory equipment, recorders, visuals, tapes, and films
- Reading- Reading laboratory devices, audiovisual materials, reading programs
- Science- National Science Foundation materials, video and electronic equipment, test instruments, transducers, and single-concept 8mm film loops.

The anticipated needs for all States of the Southeast for specific equipment or types of equipment to implement desired changes are generally described by Alabama's statement:

Many schools are now moving beyond the state of adequacy into enrichment programs that better service the learning process. As teachers become trained to use a wide range of instructional devices the demand for teaching aids accelerates. As schools expand and new schools develop there comes a continuing increase in the demand for the equipment and materials necessary for adequate instruction.

However, there are still many basic needs in all of the Southeastern States. Where there have been successful demonstration programs there is now the

need for provision of materials in order that these programs may be individualized. Instruction in the arts and humanities in Alabama is still in the beginning stage, with under 10 percent of the schools having adequate materials for instruction in this area. Instruction in industrial arts is being planned for the first time as something beyond a traditional wood-working program.

Georgia states that research-type teaching involving independent study and individualized instruction necessitates more and different types of equipment now more than ever before. Kentucky, with 73 one-classroom units and an equal number of two-classroom units, reports a dire need for equipment to furnish these schools. A distinct increase in special reading programs is reflected by a reimbursement to local districts of \$248,000 for 1971 projects over \$166,000 for 1970. Also, the entrance of career education into the curriculum is necessitating materials never before requested. Maryland needs equipment capable of producing instructional materials such as transparency makers, tape duplicators, and video cameras. The state-wide building program will call for all types of educational equipment in all subject areas, especially for science and reading. Technological developments have made available many teaching devices which greatly benefit the instructional program, and have rendered much of the equipment now in use obsolete. With educational television for all of Mississippi's elementary schools one of the program priorities, it is still not surprising that television equipment would be one of the greatest needs. Additionally, an analysis of the annual accreditation report reflects that approximately 30 percent of the elementary schools would have been classified higher if they had available the recommended instructional materials and equipment for higher classification; 25 percent of the secondary schools badly need basic equipment. Only about 50 percent of the instructional materials and equipment suggested by the standards established by the State Department of Education are available in schools of the State. Puerto Rico feels the need for the gamut of resources to enhance the efforts oriented to greater achievement - more library books and materials, more instructional and resource centers and more extensive production of tailor-made materials. Specifics include equipment and materials made necessary by the new emphasis on career education, materials and equipment such as listening systems, tape recorders and record players for listening and learning to speak English, and instruments to be used in music instruction. Tennessee says that, in order to meet State minimum standards, all 147 local agencies need equipment and materials in all academic subjects, K-12. This great need is caused by increased enrollments, special lab requirements for certain academic areas, and new accreditation standards.

Missouri and Nebraska mentioned two trends, developing in their areas, that will affect local school districts' audiovisual needs. These are: the preference for audiovisual equipment and materials intended for use by the individual rather than a group and an increase in proposals in the arts and humanities area. Illinois, Minnesota, and North Dakota specifically mentioned computers for computer-assisted instruction in some individualized instructional programs. In rank order other types of equipment needed by States of the Upper Midwest are:

Video tape recorders, cassettes and regular tape  
recorders for English, arts and humanities  
Elementary science materials, including microscopes  
Stimulation games and manipulative devices  
Planetariums.

In addition to these items above, North Dakota and Indiana indicated that with new construction as a priority, there will be a real need for new models of the older forms of audiovisual equipment and software.

All States of the Midcontinent region expressed the need for equipment and instructional materials. Some have made no quantitative survey but base their information on observations made in schools, requests for assistance, and knowledge of new or changed curriculum requiring additional supporting items. Louisiana's report illustrates this approach.

On visits to NDEA title III projects made by the NDEA staff and the subject-matter area supervisors of the elementary and secondary sections of the State Department of Education, schools and school systems requested that the programs be strengthened and extended by additional purchase of materials and media.

Because of summer institutes in the area of science, sponsored by the National Science Foundation and by several of the colleges and universities within the State of Louisiana, a need has been created for CHEM Study, HPP, ISCA\*, and other innovative programs. The need exists for special equipment and materials to implement these programs.

The State of Louisiana is currently working with local school systems in the area of environmental education studies. These include visual blight, noise, soil, water, air and antichemical pollution. Equipment and instructional materials will be needed for the studies.

In mathematics there is a need for equipment, materials and media to upgrade and strengthen present programs. For the innovative programs planned, there will be special requirements. Vocational and career education programs will need mathematical materials and media.

For the foreign language programs the needs will be audiovisual materials and graded and programed readers.

For reading and language arts the local school systems have requested the purchase of teaching materials, trade books, supplementary books, audiovisual equipment, film, filmstrips, slides, transparencies and programed materials. Remodeling in order to establish or improve reading laboratories is needed. Suitable materials and media for pilot programs in reading and career education are being requested.

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\*Chemical Educational Materials Study, Harvard Project Physics, Intermediate Science Curriculum Study.

In social studies materials of instruction are needed for conducting pilot programs, for enriching and supplementing the present programs, and for implementing new and innovative instructional approaches.

Industrial arts programs report a shortage of visual, audiovisual, curriculum, and reference materials in the schools. Equipment for teaching electronics, graphic arts, power, plastics, and materials fabrication is also needed.

In the area of arts and crafts, materials and media for extending and strengthening present programs and adding pilot programs are listed as desired.

For music education some of the needs for the next year have been listed as musical instruments and accessories, phonograph records, filmstrips, risers, electronic tuners, phonographs, recording equipment, microphones, speakers, stereo receivers, and records to accompany the basal music texts.

At the close of fiscal year 1972, Utah surveyed 26 local districts representing 87.4 percent of the total elementary and secondary enrollment in the State. Estimated quantities of various types of equipment and materials needed for each subject area were tabulated. Based on estimated costs, the areas of greatest need are science, English and reading, social studies, and industrial arts. Audiovisual equipment and materials totals exceeded other types of needed expenditures. Projection of the dollar value of needs indicated in the survey to the entire State produces a total of \$1,890,000.

The need still exists to supply audiovisual materials and equipment to American Samoa's 27 elementary schools and 4 high schools. Until NDEA title III funding became available, such equipment and materials did not exist in any of the schools. Permanent taping of daily instructional television programs is becoming more and more a necessity as ITV changes to become more of a supportive service to enhance individualized instruction in schools.

Most programs in the Trust Territory of the Pacific Islands are also in a developmental stage. Generally it is expected that more audiovisual materials and laboratory equipment will be needed, and that as curriculums are developed and field tested, resource and supplemental materials needs will become obvious. In many instances, new shops, laboratories, libraries, audiovisual centers, classrooms, etc., will be built for secondary schools. As the Territory reaches the stage where all eligible and aspiring eighth-grade graduates have the opportunity to enter secondary school, demands for equipment and materials will be major ones.

While most Alaskan school districts have made considerable progress in securing instructional materials and equipment, a shortage still exists for several reasons. District enrollments are increasing, equipment and instructional aids and materials wear out and/or become obsolete, and more materials and equipment are required to support individualized instruction and the open concept in elementary schools. Needs include video tapes,

recorders, film loops, and all types of materials geared for individualization in the academic areas.

In July 1972, a survey was conducted in California in which representative districts were asked to project their plans for NDEA title III participation in fiscal years 1973-77, indicating the subject areas in which they intended to submit applications and the kinds of equipment and materials they would need. Responses from 34 county and district offices covered a full range of subject areas. Reading led the list with the highest frequency, but was closely followed by science and mathematics. As expected, all responses mentioned continued need for the traditional equipment, audio-visual aids, and materials generally used in all subject areas. More significantly, there is a decided movement toward development of learning resource centers; multimedia centers; and reading, mathematics, and auto-tutorial laboratories. Study of the responses revealed increasing demand for such sophisticated equipment as television cameras, video tape recorders--reel and cassette, television sets and distribution systems, teaching machines, dial retrieval systems, programable calculators, computers, microprojectors, microreaders, phonoviewers, listening stations, wireless transmitters, photographic and reproduction equipment, and autotutorial systems. At last, meeting the needs of the individual is being accomplished through individualized instructional programs. These require use of specialized technological tools. Although many are now available, it is expected that a vast array of new devices will emerge within the next few years as districts and teachers modify curriculums, instructional facilities, and techniques, and as industry strives to create and produce appropriate tools.

For the first time, NDEA title III expenditures in Washington State provided more materials and equipment at the elementary than at the secondary school level. There was an additional slight shifting of expenditure priority from senior to junior high schools, indicating a response to the need for support of learning activities for younger children. It is expected that this trend will continue. Another area of need is shown by the increasing number of schools seeking to develop locally appropriate slides and tapes, rather than acquire ready-made materials. Project summaries also reveal a steadily increasing use of materials bought with title III funds to support individualized learning activities. The use pattern of title III funds in the State also shows a light but definite withdrawal from support of basic subject areas. Instead, during fiscal year 1972 there emerged a pattern of increasing support for areas such as history, civics, economics, or the arts and humanities.

Discussion with local education agency staff brings out the fact that title III support has not shifted to these subject areas because basic subject areas (reading, science, mathematics, and English) have been deemphasized. Rather, the most pressing immediate needs for equipment and materials in those subject areas have been partially met, thus allowing an expansion of support to subjects other than the basic ones. Strong support is still given to basic subjects, but less expensive purchases in these areas seems to be the tendency.

## 8. OBJECTIVES FOR FISCAL YEAR 1973

The uncertainty of funding for NDEA title III-A for fiscal year 1973 resulted in the reassignment of some staff members to other programs, thus creating serious problems in planning. Some State departments of education were reluctant to commit staff time to planning for a program with so indefinite a future. In other cases, however, the work of curriculum and subject specialists continued under State funding so that to this extent, planning for continued strengthening of instruction in the academic subject areas went forward.

Connecticut, Delaware, Massachusetts, New Hampshire, New Jersey, New York, and Vermont either planned to continue with the same objectives for fiscal year 1973 or planned only minor modifications. Rhode Island proposes to add an objective for the advancement of environmental/ecological education through instruction in the sciences, while Maine plans to add objectives related to education in the arts, for open schools, and individualized instruction.

Pennsylvania reports several changes in management goals planned for fiscal year 1973. To reduce paperwork and stimulate more careful needs assessment and efficient spending by local schools, it is planned to limit each school district to one regular and one special project. Reduction in per pupil allocation for regular projects will be made to provide for corresponding increases for special projects. Fiscal year 1972 represented another year in which Pennsylvania schools expended considerably more NDEA title III-A funds for equipment than for materials. Since the needs assessment (see table 2) indicates great need for audiovisual and reference materials, schools will be encouraged to develop their project applications accordingly.

The States of the Southeast in general plan to continue to operate the title III program for 1973 under the same broad and flexible objectives stated for 1972. In addition, Florida plans to begin to organize the production of a sight-sound presentation for use in disseminating information about exemplary and creative practices and procedures in the use of media. North Carolina plans to use 5 percent of NDEA title III funds as special project money, with a matching amount from ESEA title II funds, as an incentive for units that need additional money for innovative projects. To assure that each pupil throughout Virginia will have every possible opportunity to develop his potential to the maximum, the State Board of Education has given top priority during 1973 to the achievement of high standards of quality in every school. Individualizing instruction will be emphasized to a greater degree and career education will become increasingly important. These new thrusts will require more equipment and materials, and are compounded by reassignment of children and teachers to other schools than the one they are currently in. Advances in technology, demands for social reform, explorations in space and oceanography require new methods and techniques of instruction. Obsolescence comes rapidly and our classrooms must be prepared to meet challenges with new and additional equipment and materials.

In general, objectives set for fiscal year 1972 in the Upper Midwest States will continue during fiscal year 1973. Nebraska has set one additional objective--to form an advisory group to review the existing State NDEA title III procedures and policies and to revise these to reflect changing curricular patterns and to include current policies. Illinois, Indiana, and Iowa will add an objective for title III support of the Right To Read program.

To support the Illinois Office of the Superintendent of Public Instruction's objective for implementing the Social Studies Individualized Learning Program a portion of title III State administrative funds will be used for inservice workshops, assessment instruments, and guidelines.

Most States of the Midcontinent region report that objectives for 1972 will be continued through 1973. Several list additional or revised objectives, such as Colorado which states that a portion of the State's entitlement will be designated for competitive grants for projects showing creativity, new approaches to old problems, new ways of utilizing equipment and materials, or innovative practices.

Alaska, American Samoa, Arizona, the Bureau of Indian Affairs, California, Guam, Hawaii, Nevada, Oregon, the Trust Territory of the Pacific Islands, and Washington State carried over the same program objectives from 1972 to 1973, but several made some changes in their management objectives. The Trust Territory planned to give consideration also in 1973 to possible NDEA title III contributions to equipping a home economics/science/business complex on their Samoana Campus.

## 9. ADMINISTRATION OF NDEA TITLE III-A

### Expenditures for Administration

The Federal allotment for administration of the NDEA title III-A program amounted in fiscal year 1972 to \$2 million. Of this amount, \$1.5 million (76 percent of the allotment) was expended by State departments of education for administration and supervisory and related services, with \$471,330 carried over for expenditure in fiscal year 1973 (table 3). Federal expenditures were more than matched by State department of education expenditures of \$2.6 million, providing a total of about \$4 million for program administration. Administrative funds are used for such items as salaries of professional and clerical staff assigned to the program, for workshops and conferences dealing with instruction in the academic subjects, staff travel, office equipment, and other equipment used for State programs of supervision in the academic subjects.

### Expenditures for Equipment and Materials

Federal, State, and local total expenditures in fiscal year 1972 under the NDEA title III program for equipment, materials, and minor remodeling used

to strengthen instruction in the academic subjects amounted to \$86.9 million (table 4). Of this amount, \$85.3 million went for equipment and materials, with less than 2 percent used for minor remodeling. Equipment purchased included audiovisual equipment such as projectors, recording equipment, and television receivers and recorders, and laboratory and other equipment such as microscopes, planetariums, biological slides and models, tachistoscopes, individual reading pacers, and laboratory apparatus for physical construction of mathematical models. Materials purchased were such items as 8 and 16mm films, filmstrips, tape and disc recordings, books, maps, globes, charts, instructional games, and pamphlets and periodicals.

The Federal allotment for equipment, materials, and minor remodeling in fiscal year 1972 was \$47,750,000 (table 5). A total of \$40.9 million (85.6 percent of the allotment) was reported expended, with \$6.8 million carried over for expenditure in fiscal year 1973. State and local funds used for the same purposes to match Federal expenditures amounted to \$45.5 million. In addition, five States - Georgia, Maryland, New York, North Carolina, and Tennessee - used \$492,691 from the Appalachian Regional Development Act to match NDEA title III funds.

Although the bulk of NDEA title III funds has been spent for years to purchase equipment and materials for strengthening instruction in the natural sciences, expenditures for English and reading instruction ranked first in fiscal year 1972, amounting to \$26.4 million (table 6). Expenditures for the natural sciences and social sciences ranked second and third with expenditures amounting to \$21.4 million and \$12.9 million, respectively. Among the seven subject areas, expenditures for equipment and materials for use in mathematics and modern foreign language instruction ranked lowest.

### Participation

State departments of education in the 50 States, American Samoa, the Trust Territory of the Pacific Islands, Guam, Puerto Rico, the Virgin Islands, District of Columbia, and the Bureau of Indian Affairs reported that of 17,625 local education agencies, 15,823 were eligible to participate in NDEA title III-A (table 7). Of this number, almost 62 percent actually did participate in the program. There were 39.3 million public school pupils enrolled in the 9,807 local education agencies which participated in NDEA title III-A in fiscal year 1972.

All local education agencies do not participate in NDEA title III-A because projects are approved on the basis of established priorities. These priorities serve to assign the relative importance and order of project approval. The priorities usually relate to educational objectives in the academic subjects, statewide instructional needs, and special pupil and program needs for instructional improvement in the various academic subject fields such as reading in English for pupils whose primary language is not English, longer sequences of foreign language study, and programs for elementary school science.

#### 10. LOANS TO PRIVATE NONPROFIT ELEMENTARY AND SECONDARY SCHOOLS

Loans to nonprofit schools under NDEA title III-A are administered directly by the U.S. Office of Education.

In fiscal year 1972, loans benefited more than 1,800 students. Funds available totaled \$250,000 of which \$154,980 was approved for elementary and secondary schools. The distribution is shown in the following table:

State	City	School	Amount
California	Los Angeles	Le Lycee Francais	\$ 7,850
	Sacramento	Sacramento Waldorf	7,100
	Los Angeles	West Coast Talmudical Seminary	16,880
Connecticut	East Haddam	Becket Academy	65,600
Maryland	Silver Spring	Yeshiva High School	7,100
New York	Flushing	Solomon Schechter School of Queens	26,250
	Flushing	Solomon Schechter School of Queens	18,700
Oklahoma	Midwest City	Chilton Powell Day School	5,500

Loans were for the acquisition of equipment and instructional materials in the areas of natural science, mathematics, social science, English, reading, and the arts and humanities. There was minor remodeling in the areas of science, English, reading, and the arts and humanities. The funds were used by subject, in percentages and by amount as shown below:

Subject	Amount	Percentage of total
Science	\$ 90,332	58.3
History	36,155	23.3
Arts and humanities	21,404	13.8
Mathematics	2,078	1.4
Modern foreign languages	1,766	1.2
Reading	1,738	1.1
English	<u>1,507</u>	<u>0.9</u>
	\$154,980	100.0

The Solomon Schechter School of Queens received two loans totaling \$44,950. The first loan was for the purchase of science equipment for the elementary school. The school was established in 1957 as a small elementary school in rented quarters. It outgrew that facility and its own elementary school was built. Later, classrooms had to be added because of increased enrollment. A new secondary school building program with plans to open in September 1972 required additional science equipment whereby a modern science program could be offered to its high school students. Another loan was provided for this purpose. This science building offered the largest square-foot area per pupil of any area of the building, with the equipment planned for group and individual work.

Table 1. Matching patterns utilized by State departments of education in reimbursing local education agencies for projects approved under title III-A of the National Defense Education Act: Fiscal year 1972

State or other area	Percent of projects reimbursed		
	At 50%	Less than 50%	More than 50%
1	2	3	4
Alabama	100	-	-
Alaska	88	12	-
Arizona	100	-	-
Arkansas	100	-	-
California	51	49	-
Colorado	100	-	-
Connecticut	100	-	-
Delaware	100	-	-
Florida	65	35	-
Georgia 1/	100	-	-
Hawaii	100	-	-
Idaho	100	-	-
Illinois	-	100	-
Indiana	100	-	-
Iowa	-	100	-
Kansas	22	78	-
Kentucky	100	-	-
Louisiana	72	28	-
Maine	100	-	-
Maryland 1/	100	-	-
Massachusetts	97	2	1
Michigan	93	1	6
Minnesota	100	-	-
Mississippi 1/	100	-	-
Missouri	33-1/3	33-1/3	33-1/3
Montana	-	100	-
Nebraska	100	-	-
Nevada	100	-	-
New Hampshire	100	-	-
New Jersey	84	10	-
New Mexico	-	100	-
New York	100	-	-
North Carolina 1/	100	-	-
North Dakota	62	38	-
Ohio	100	-	-
Oklahoma	100	-	-
Oregon	32	23	45
Pennsylvania	100	-	-
Rhode Island	100	-	-
South Carolina 1/	100	-	-
South Dakota	100	-	-
Tennessee 1/	100	-	-
Texas	100	-	-
Utah	7-1/2	47-1/2	45
Vermont	100	-	-
Virginia	100	-	-
Washington	100	-	-
West Virginia	100	-	-
Wisconsin	9	24	67
Wyoming	54	-	46
American Samoa	100	-	-
Trust Territory of the Pacific Islands	50	-	50
District of Columbia 2/	-	-	-
Guam	100	-	-
Puerto Rico 2/	-	-	-
Virgin Islands 2/	-	-	-
Bureau of Indian Affairs 3/	-	30	70

1/ 50-percent local share includes 30-percent reimbursement under section 214 of the Appalachian Regional Development Act.

2/ Information not available.

3/ Matching required through commitment of regular BIA program funds.

Table 2. Equipment and materials needs in Pennsylvania schools in the academic subjects: 1971-72

Academic subject	Percent of schools falling below State standards for:					Estimated funds needed to meet State standards in all areas
	1	2	3	4	5	
		Laboratory and special equipment	Audiovisual materials	Reference materials	Audiovisual equipment	
Arts and humanities		89	83	80	83	\$8,379,000
Civics		57	73	70	73	1,098,000
Economics		60	78	69	70	1,079,000
English		75	76	65	83	4,845,000
Geography		69	70	78	82	2,348,000
History		65	74	69	76	2,609,000
Industrial arts		78	75	70	71	10,865,000
Mathematics		83	79	65	71	5,300,000
Modern foreign languages		66	64	63	79	3,755,000
Reading		65	70	60	80	4,704,000
Science		78	80	47	63	6,800,000
Special studies, (elementary school history, civics, geography and economics)		63	82	63	81	1,200,000

Table 3. Federal and State funds expended for NDEA title III State administration: Fiscal year 1972

State or other area	Allotment for State administration	EXPENDITURES			Federal amount as percent of allotment	Federal amount as percent of total	Federal amount carried over
		Federal amount	State amount	Total administration			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total	\$2,000,000	\$1,528,670	\$2,615,668	\$4,144,338	76.2	36.9	\$471,330
Alabama	33,703	33,703	43,966	77,669	100.0	43.4	-0-
Alaska	13,333	3,355	3,355	6,710	25.2	50.0	9,978
Arizona	17,221	-0-	-0-	-0-	0.0	0.0	17,221
Arkansas	18,419	18,419	19,618	38,037	100.0	48.4	-0-
California	175,946	156,224	156,224	312,448	88.8	50.0	19,722
Colorado	20,109	19,364	19,364	38,728	96.3	50.0	745
Connecticut	26,519	26,519	30,040	56,559	100.0	46.9	-0-
Delaware	13,333	100	16,417	16,517	0.8	0.6	13,233
Florida	56,136	26,420	152,436	178,856	47.1	14.8	29,716
Georgia	44,409	19,895	16,448	36,343	44.8	54.7	24,514
Hawaii	13,333	13,333	197,897	211,230	100.0	6.3	-0-
Idaho	13,333	5,416	5,416	10,832	40.6	50.0	7,917
Illinois	100,264	25,298	310,668	335,966	25.2	7.5	74,966
Indiana	48,142	48,142	73,622	121,764	100.0	39.5	-0-
Iowa	26,237	26,237	49,090	75,327	100.0	34.8	-0-
Kansas	21,483	20,969	20,969	41,938	97.6	50.0	514
Kentucky	30,040	30,040	30,040	60,080	100.0	50.0	-0-
Louisiana	37,788	36,115	37,957	74,072	95.6	48.8	1,673
Maine	13,333	2,376	2,377	4,753	17.8	50.0	10,957
*Maryland	35,464	19,896	21,037	40,933	56.1	48.6	15,568
Massachusetts	47,755	41,914	41,914	83,828	87.8	50.0	5,841
Michigan	85,402	84,060	97,628	181,688	98.4	46.3	1,342
Minnesota	36,309	1,970	18,652	20,622	5.4	9.6	34,339
Mississippi	23,948	16,629	16,629	33,258	69.4	50.0	7,319
Missouri	41,873	35,741	35,741	71,482	85.4	50.0	6,132
Montana	13,333	12,622	26,620	39,242	94.7	32.2	711
Nebraska	13,629	6,385	10,339	16,724	46.8	31.2	7,244
Nevada	13,333	7,580	8,032	15,612	56.9	48.6	5,753
New Hampshire	13,333	12,237	12,237	24,474	91.8	50.0	1,096
New Jersey	62,475	62,475	170,184	232,659	100.0	26.9	-0-
New Mexico	13,333	-0-	-0-	-0-	0.0	0.0	13,333
New York	154,533	143,628	143,628	287,256	92.9	50.0	10,905
North Carolina	48,212	46,442	46,442	92,884	96.3	50.0	1,770
North Dakota	13,333	13,333	15,386	28,719	100.0	46.4	-0-
Ohio	100,545	31,469	66,080	97,549	31.3	32.3	69,076
Oklahoma	22,539	22,539	24,738	47,277	100.0	47.7	-0-
Oregon	18,243	18,243	37,640	55,883	100.0	32.6	-0-
Pennsylvania	101,813	101,813	112,916	214,729	100.0	47.4	-0-
Rhode Island	13,333	9,821	9,821	19,642	73.7	50.0	3,512
South Carolina	26,695	24,585	66,023	90,608	92.1	27.1	2,110
*South Dakota	13,333	99	99	198	0.7	50.0	13,234
Tennessee	36,027	36,027	53,350	89,377	100.0	40.3	-0-
Texas	109,737	88,773	88,819	177,592	80.9	50.0	20,964
Utah	13,333	13,333	13,333	26,666	100.0	50.0	-0-
Vermont	13,333	-0-	-0-	-0-	0.0	0.0	-0-
Virginia	42,930	34,426	134,110	168,536	80.2	20.4	8,504
Washington	30,639	26,492	26,492	52,984	86.5	50.0	4,147
West Virginia	15,953	15,953	16,660	32,613	100.0	48.9	-0-
Wisconsin	40,535	40,535	66,403	106,938	100.0	61.0	-0-
Wyoming	13,333	1,514	1,324	2,838	11.4	53.3	11,819
*American Samoa	4,000	4,000	4,000	8,000	100.0	50.0	-0-
Trust Territory	4,000	3,261	-0-	3,261	81.5	100.0	739
District of Columbia	13,333	13,333	13,333	26,666	100.0	50.0	-0-
Guam	4,000	4,000	4,000	8,000	100.0	50.0	-0-
Puerto Rico	19,000	17,617	22,154	39,771	92.7	44.3	1,383
*Virgin Islands	4,000	4,000	4,000	8,000	50.0	50.0	-0-
Bureau of Indian Affairs	-0-	-0-	-0-	-0-	0.0	0.0	-0-

\*Estimated.

Table 4. Federal and State-local expenditures for materials and equipment and minor remodeling under NDEA title III: Fiscal year 1972

State or other area	Total expenditures	Equipment and materials		Minor remodeling	
		Cost	Percent	Cost	Percent
(1)	(2)	(3)	(4)	(5)	(6)
	\$86,917,934	\$85,348,139	98.19	\$1,569,795	1.81
Alabama	2,272,938	2,272,938	100.00	-0-	0.0
Alaska	162,460	162,460	100.0	-0-	0.0
Arizona	1,038,430	1,025,250	98.7	13,180	1.3
Arkansas	1,226,854	1,226,354	100.0	500	0.0
California	7,703,126	7,655,367	99.4	47,759	0.6
*Colorado	1,506,642	1,489,257	98.8	17,385	1.2
Connecticut	946,904	946,904	100.0	-0-	0.0
Delaware	243,522	243,522	100.0	-0-	0.0
Florida	2,551,815	2,551,815	100.0	-0-	0.0
Georgia	2,663,660	2,663,660	100.0	-0-	0.0
Hawaii	1,075,223	1,075,223	100.0	-0-	0.0
Idaho	455,730	448,170	98.3	7,560	1.7
Illinois	6,074,663	5,257,544	86.5	817,119	13.5
Indiana	2,471,924	2,444,732	98.9	27,192	1.1
Iowa	1,285,942	1,285,942	100.0	-0-	0.0
Kansas	1,221,649	1,197,422	98.0	24,227	2.0
Kentucky	963,009	963,009	100.0	-0-	0.0
Louisiana	381,963	381,963	100.0	-0-	0.0
Maine	125,278	125,278	100.0	-0-	0.0
*Maryland	1,231,025	1,231,025	100.0	-0-	0.0
Massachusetts	1,999,309	1,999,309	100.0	-0-	0.0
Michigan	1,824,910	1,602,932	87.8	221,978	12.2
Minnesota	2,121,426	2,121,426	100.0	-0-	0.0
Mississippi	1,342,758	1,342,442	99.9	316	0.1
Missouri	2,331,999	2,331,999	100.0	-0-	0.0
Montana	475,834	469,745	98.7	6,089	1.3
Nebraska	486,924	486,924	100.0	-0-	0.0
Nevada	134,083	134,083	100.0	-0-	0.0
New Hampshire	9,397	9,397	100.0	-0-	0.0
New Jersey	1,080,333	1,046,268	96.8	34,065	3.2
New Mexico	170,148	170,148	100.0	-0-	0.0
New York	5,339,858	5,185,009	97.1	154,849	2.9
North Carolina	1,329,678	1,329,678	100.0	-0-	0.0
North Dakota	453,748	453,748	100.0	-0-	0.0
*Ohio	5,107,586	5,077,415	99.4	30,171	0.6
Oklahoma	1,284,296	1,284,296	100.0	-0-	0.0
Oregon	1,198,577	1,197,632	99.9	945	0.1
Pennsylvania	4,860,080	4,860,080	100.0	-0-	0.0
Rhode Island	203,994	203,994	100.0	-0-	0.0
South Carolina	1,716,430	1,716,260	100.0	170	0.0
*South Dakota	470,762	470,762	100.0	-0-	0.0
Tennessee	2,147,009	2,147,009	100.0	-0-	0.0
Texas	5,195,416	5,191,041	99.9	4,375	0.1
Utah	860,352	851,547	99.0	8,805	1.0
Vermont	209,212	190,938	91.3	18,274	8.7
Virginia	2,186,278	2,186,278	100.0	-0-	0.0
Washington	1,490,646	1,490,646	100.0	-0-	0.0
West Virginia	1,059,355	1,059,355	100.0	-0-	0.0
Wisconsin	2,336,970	2,326,377	99.5	10,593	0.5
Wyoming	191,732	191,732	100.0	-0-	0.0
*American Samoa	50,000	45,000	90.0	5,000	10.0
Trust Territory	12,665	4,410	34.8	8,255	65.2
District of Columbia	233,908	233,908	100.0	-0-	0.0
Guam	100,000	100,000	100.0	-0-	0.0
Puerto Rico	1,199,504	1,088,516	90.7	110,988	9.3
*Virgin Islands	50,000	50,000	100.0	-0-	0.0
Bureau of Indian Affairs	50,000	50,000	100.0	-0-	0.0

\*Estimated.

Table 5. Sources of funds and percent of total expenditures for acquisition of equipment and materials and minor remodeling under NDEA title III:  
Fiscal year 1972

State or other area	Allotment	Total expenditures (col.4+7+9)	Federal expenditures			State-local expenditures		Appalachian Regional Development Act	
			Expenditures	Percent of allotment	Percent of total	Expenditures	Percent of total	Cost	Percent of total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Total	\$47,750,000	\$86,917,934	\$40,911,060	85.6	47.0	\$45,514,183	52.4	492,691	0.6
Alabama	1,136,469	2,272,938	1,136,469	100.0	50.0	1,136,469	50.0	-0-	0.0
Alaska	81,230	162,460	81,230	100.0	50.0	81,230	50.0	-0-	0.0
Arizona	519,385	1,038,770	519,385	99.9	50.0	519,385	50.0	-0-	0.0
Arkansas	612,603	1,225,206	612,603	100.0	49.9	612,603	50.1	-0-	0.0
California	3,606,735	7,213,470	3,606,735	100.0	46.8	4,096,391	53.2	-0-	0.0
Colorado	542,606	1,085,212	542,606	1.6	29.6	964,036	70.3	-0-	0.0
Connecticut	464,475	928,950	464,475	100.0	45.0	464,475	51.0	-0-	0.0
Delaware	121,765	243,530	121,765	99.9	50.0	121,765	50.0	-0-	0.0
Florida	1,478,113	2,956,226	1,478,113	86.4	49.9	1,478,113	50.1	-0-	0.0
Georgia	1,372,146	2,744,292	1,372,146	97.0	50.0	1,372,146	44.6	143,947	5.4
Hawaii	206,984	413,968	206,984	100.0	19.2	206,984	80.8	-0-	0.0
Idaho	227,865	455,730	227,865	100.0	50.0	227,865	50.0	-0-	0.0
Illinois	2,033,514	4,067,028	1,997,723	98.2	32.8	4,067,028	67.2	-0-	0.6
Indiana	1,235,962	2,471,924	1,235,962	100.0	50.0	1,235,962	50.0	-0-	0.0
Iowa	679,824	1,359,648	642,971	94.5	50.0	642,971	50.0	-0-	0.0
Kansas	569,563	1,139,126	569,563	100.0	46.6	569,563	53.4	-0-	0.6
Kentucky	943,379	1,886,758	481,504	51.0	49.9	481,504	50.1	-0-	0.6
Louisiana	1,241,731	2,483,462	190,982	15.3	50.0	190,982	50.0	-0-	0.0
Maine	265,167	530,334	62,639	23.6	50.0	62,639	50.0	-0-	0.0
Maryland	636,034	1,272,068	600,806	71.8	48.8	600,806	48.8	29,413	2.4
Massachusetts	979,895	1,959,790	979,895	100.0	49.0	1,019,414	51.0	-0-	0.0
Michigan	2,127,321	4,254,642	942,869	44.3	51.6	882,041	48.4	-0-	0.0
Minnesota	993,140	1,986,280	993,140	100.0	46.8	1,128,286	53.2	-0-	0.0
Mississippi	807,522	1,615,044	671,379	83.1	50.0	671,379	50.0	-0-	0.0
Missouri	1,075,448	2,150,896	1,074,528	99.9	46.0	1,257,471	54.0	-0-	0.0
Montana	207,290	414,580	207,290	100.0	43.5	207,290	56.5	-0-	0.0
Nebraska	360,036	720,072	243,462	67.6	50.0	243,462	50.0	-0-	0.0
Nevada	93,713	187,426	67,042	71.5	50.0	67,042	50.0	-0-	0.0
New Hampshire	167,313	334,626	5,294	3.1	56.3	4,103	43.7	-0-	0.0
New Jersey	1,215,916	2,431,832	533,576	43.9	49.3	546,757	50.7	-0-	0.0
New Mexico	378,822	757,644	83,373	22.0	49.0	86,775	51.0	-0-	0.0
New York	2,669,929	5,339,858	2,669,929	100.0	50.0	2,669,929	50.0	-0-	0.0
North Carolina	1,518,683	3,037,366	676,263	44.5	50.8	606,188	45.6	47,227	3.6
North Dakota	197,595	395,190	197,595	100.0	43.5	256,153	56.5	-0-	0.0
Ohio	2,558,443	5,116,886	2,553,793	99.8	50.0	2,553,793	50.0	-0-	0.0
Oklahoma	642,148	1,284,296	642,148	100.0	50.0	642,148	50.0	-0-	0.0
Oregon	464,377	928,754	460,031	99.0	38.3	738,546	61.7	-0-	0.0
Pennsylvania	2,430,040	4,860,080	2,430,040	100.0	50.0	2,430,040	50.0	-0-	0.0
Rhode Island	169,701	339,402	101,997	60.1	50.0	101,997	50.0	-0-	0.0
South Carolina	900,151	1,800,302	767,306	85.2	44.4	835,101	48.9	114,023	6.7
South Dakota	205,944	411,888	197,355	95.8	47.9	273,407	58.1	-0-	0.0
Tennessee	1,129,203	2,258,406	1,073,505	95.0	50.0	915,423	42.6	158,081	7.4
Texas	3,244,678	6,489,356	2,597,708	80.0	50.0	2,597,708	50.0	-0-	0.0
Utah	369,409	738,818	369,409	100.0	42.9	490,943	57.1	-0-	0.0
Vermont	113,326	226,652	104,606	92.3	50.0	104,606	50.0	-0-	0.0
Virginia	1,210,496	2,420,992	1,101,127	90.9	50.3	1,085,151	49.7	-0-	0.0
Washington	716,559	1,433,118	716,559	100.0	48.0	774,087	52.0	-0-	0.0
West Virginia	509,873	1,019,746	509,873	100.0	48.1	549,482	51.9	-0-	0.0
Wisconsin	1,072,445	2,144,890	1,073,445	100.0	45.8	1,254,525	54.2	-0-	0.0
Wyoming	92,455	184,910	92,455	100.0	48.2	99,277	51.8	-0-	0.0
American Samoa	50,000	50,000	25,000	50.0	50.0	25,000	50.0	-0-	0.0
Trust Territory	50,000	50,000	12,665	25.3	100.0	-0-	0.0	-0-	0.0
District of Columbia	116,954	116,954	116,954	100.0	50.0	116,954	50.0	-0-	0.0
Guam	50,000	50,000	50,000	100.0	50.0	50,000	50.0	-0-	0.0
Puerto Rico	50,000	50,000	585,625	100.0	48.8	613,879	51.2	-0-	0.0
Virgin Islands	50,000	50,000	25,000	100.0	50.0	25,000	50.0	-0-	0.0
Bureau of Indian Affairs	50,000	50,000	50,000	100.0	100.0	-0-	0.0	-0-	0.0

\*Estimated.

Table 6. Federal and State-local funds expended for materials and equipment under NDEA title III in seven academic subject areas: Fiscal year 1972

State or other area (1)	Natural sciences		Mathematics		Social studies		Modern foreign languages	
	Cost (2)	Percent (3)	Cost (4)	Percent (5)	Cost (6)	Percent (7)	Cost (8)	Percent (9)
Total	\$21,451,575	25.1	\$6,732,343	7.9	\$12,912,390	15.1	\$2,895,936	3.4
Alabama	526,699	23.2	160,846	7.1	338,000	14.8	29,752	1.3
Alaska	27,287	16.8	5,452	3.4	37,398	23.0	3,602	2.2
Arizona	168,775	16.4	89,659	8.7	126,224	12.3	15,005	1.5
Arkansas	507,672	41.4	51,653	4.2	116,458	9.5	23,205	1.9
California	1,300,647	17.0	806,876	10.6	1,679,587	21.9	408,031	5.3
Colorado	397,594	26.7	166,882	11.2	239,227	16.0	88,638	6.0
Connecticut	259,108	27.4	73,289	7.7	115,280	12.2	47,441	5.0
Delaware	19,327	7.9	16,290	6.7	4,185	1.7	2,000	0.8
Florida	724,072	28.4	69,873	2.7	254,586	10.0	9,573	0.4
Georgia	452,822	17.0	293,002	11.0	239,729	9.0	26,637	1.0
Hawaii	70,027	6.5	26,553	2.5	72,333	6.7	10,459	1.0
Idaho	117,595	26.2	17,552	2.6	58,776	13.1	2,176	0.5
Illinois	1,072,764	20.4	374,108	7.1	766,039	14.6	166,951	3.2
Indiana	902,252	36.9	84,044	3.4	249,666	10.2	370,788	15.2
Iowa	264,094	20.5	97,306	7.6	280,785	21.8	21,116	1.7
Kansas	336,613	28.1	49,773	4.1	155,384	13.0	58,356	4.9
Kentucky	276,547	28.7	51,280	5.3	88,847	9.2	10,459	1.1
Louisiana	89,115	23.3	20,793	5.4	49,843	13.1	24,621	6.4
Maine	49,876	39.8	8,695	6.9	23,769	19.0	3,232	2.6
*Maryland	384,676	31.3	126,932	10.3	330,150	26.8	48,553	3.9
Massachusetts	548,403	27.4	170,068	8.5	80,671	4.0	104,970	5.3
Michigan	296,419	18.5	116,464	7.3	314,598	19.6	55,896	3.5
Minnesota	399,945	18.9	162,964	7.7	500,870	23.6	127,173	6.0
Mississippi	342,502	25.5	123,315	9.2	195,497	14.6	31,366	2.3
Missouri	445,694	19.1	120,829	5.2	454,103	19.5	101,125	4.3
Montana	206,885	44.0	17,214	3.7	43,065	9.2	7,815	1.7
Nebraska	241,173	49.4	39,687	8.2	60,958	12.5	23,914	4.9
Nevada	38,269	28.5	8,472	6.3	22,646	16.9	9,615	7.2
*New Hampshire	2,952	31.4	2,174	23.1	205	2.3	-0-	0.0
New Jersey	174,715	16.7	279,808	26.7	87,447	8.4	12,568	1.2
New Mexico	20,221	11.9	6,327	3.7	11,108	6.5	12,136	7.1
New York	1,031,370	19.9	788,960	15.2	681,746	13.1	122,558	2.4
*North Carolina	455,313	34.2	66,542	5.0	286,542	21.6	33,709	2.5
North Dakota	266,580	58.7	28,941	6.4	58,461	12.9	10,050	2.2
Ohio	1,372,933	27.0	363,543	7.2	812,894	16.0	137,090	2.7
Oklahoma	256,859	20.0	102,744	8.0	128,430	10.0	38,529	3.0
Oregon	245,223	20.5	50,075	4.2	341,420	28.5	37,069	3.1
Pennsylvania	1,578,880	32.5	327,000	6.7	675,000	13.9	164,000	3.4
*Rhode Island	46,604	22.8	35,408	17.4	21,520	10.6	3,748	1.8
South Carolina	507,980	29.6	83,899	4.9	361,169	21.0	27,196	1.6
South Dakota	224,657	47.7	22,182	4.7	50,272	10.7	1,967	0.4
Tennessee	726,058	33.8	158,543	7.4	251,053	11.7	34,772	1.6
Texas	1,417,801	27.3	328,310	6.3	663,840	11.7	144,940	2.8
Utah	183,496	21.6	55,806	6.6	256,588	30.1	20,772	2.4
Vermont	35,555	18.6	13,253	7.0	38,351	20.1	8,284	4.3
Virginia	682,081	31.2	188,542	8.6	341,606	15.6	65,885	3.0
Washington	296,735	19.9	85,470	5.8	414,903	27.8	34,520	2.3
West Virginia	294,744	27.8	129,296	12.2	176,637	16.7	32,693	3.1
Wisconsin	528,279	22.7	143,494	6.2	299,277	12.9	63,444	2.7
Wyoming	45,774	23.9	13,320	6.9	20,325	10.0	2,602	1.4
*American Samoa	10,000	22.3	6,000	13.3	6,000	13.3	1,000	2.2
Trust Territory	-0-	0.0	-0-	0.0	-0-	0.0	-0-	0.0
District of Columbia	25,960	11.1	43,852	18.7	14,238	6.1	25,630	11.0
Guam	19,900	19.9	14,100	14.1	27,000	27.0	1,700	1.7
Puerto Rico	517,703	47.6	42,642	3.9	41,922	3.8	22,605	2.1
*Virgin Islands	10,000	20.0	4,000	8.0	4,000	8.0	4,000	8.0
Bureau of Indian Affairs	6,349	12.7	3,238	6.5	1,762	3.5	-0-	0.0

\*Estimated.

Table 6. Federal and State-local funds expended for materials and equipment under NDEA title III in seven academic subject areas: Fiscal year 1972 - Continued

State or other area	English and reading		Arts and humanities		Industrial arts		Total expenditures
	Cost	Percent	Cost	Percent	Cost	Percent	Cost
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Total	\$26,456,706	31.0	\$6,920,003	8.1	\$7,979,186	9.4	\$85,348,139
Alabama	1,047,641	46.1	115,855	5.1	54,145	2.4	2,272,938
Alaska	72,434	44.6	10,717	6.6	5,570	3.4	162,460
Arizona	450,949	44.0	91,069	8.9	83,568	8.2	1,025,250
Arkansas	527,366	43.0	-0-	0.0	-0-	0.0	1,226,354
California	1,945,994	25.4	892,616	11.7	621,516	8.1	7,655,367
Colorado	364,411	24.5	92,451	6.2	140,034	9.4	1,489,257
Connecticut	347,411	36.8	69,406	7.3	34,461	3.6	946,904
Delaware	111,463	45.8	11,849	4.9	78,408	32.2	243,522
Florida	1,358,592	53.2	50,585	2.0	84,534	3.3	2,551,815
Georgia	1,465,013	55.0	133,183	5.0	53,273	2.0	2,663,660
Hawaii	793,016	73.7	61,936	5.8	40,899	3.8	1,075,223
Idaho	153,941	34.3	32,647	7.3	71,483	16.0	448,170
Illinois	1,696,493	32.3	294,096	5.6	886,095	16.8	5,257,544
Indiana	427,642	17.5	140,900	5.8	269,440	11.0	2,444,732
Iowa	334,435	26.0	79,134	6.1	209,070	16.3	1,285,942
Kansas	337,215	28.2	99,685	8.3	160,396	13.4	1,197,422
Kentucky	360,022	37.4	135,834	14.1	40,020	4.2	963,009
Louisiana	116,394	30.5	39,340	10.3	41,857	11.0	381,961
Maine	34,701	27.7	1,302	1.0	3,703	3.0	125,278
*Maryland	267,747	21.8	-0-	0.0	72,967	5.9	1,231,025
Massachusetts	451,517	22.6	451,736	22.6	191,944	9.6	1,999,309
Michigan	602,660	37.6	74,266	4.6	142,629	8.9	1,602,932
Minnesota	635,612	30.0	11,703	0.5	283,159	13.3	2,121,426
Mississippi	442,121	32.9	121,584	9.1	86,057	6.4	1,342,442
Missouri	636,603	27.3	340,868	14.6	232,779	10.0	2,331,999
Montana	105,109	22.4	54,729	11.6	34,928	7.4	469,745
Nebraska	88,949	18.3	13,163	2.7	19,080	3.9	486,924
Nevada	45,142	33.7	-0-	0.0	9,939	7.4	134,083
*New Hampshire	3,170	33.7	896	9.5	-0-	0.0	9,397
New Jersey	301,213	28.8	119,760	11.4	70,757	6.8	1,046,268
New Mexico	94,654	55.6	6,923	4.1	18,779	11.1	170,148
New York	1,445,407	27.9	352,267	6.8	762,701	14.7	5,185,009
*North Carolina	411,761	31.0	66,442	5.0	9,369	0.7	1,329,678
North Dakota	63,839	14.1	1,122	0.2	24,755	5.5	453,748
Ohio	1,556,228	30.7	457,475	9.0	377,252	7.4	5,077,415
Oklahoma	385,289	30.0	166,958	13.0	205,487	16.0	1,284,296
Oregon	365,512	30.5	104,966	8.8	53,367	4.4	1,197,632
Pennsylvania	900,480	18.5	588,080	12.1	626,640	12.9	4,860,080
*Rhode Island	63,042	20.9	17,940	8.8	15,732	7.7	203,994
South Carolina	623,494	36.3	74,540	4.4	37,982	2.2	1,716,260
South Dakota	118,259	25.1	4,173	0.9	49,252	10.5	470,762
Tennessee	781,952	36.4	76,262	3.6	118,369	5.5	2,147,009
Texas	1,724,148	33.2	675,238	13.0	296,764	5.7	5,191,041
Utah	232,272	27.3	46,871	5.5	55,742	6.5	851,547
Vermont	54,782	28.7	8,617	4.5	32,096	16.8	190,938
Virginia	613,056	28.1	-0-	0.0	295,108	13.5	2,186,278
Washington	337,433	22.6	220,986	14.8	100,599	6.8	1,490,646
West Virginia	284,117	26.8	116,961	11.0	24,907	2.4	1,059,355
Wisconsin	563,448	24.2	339,357	14.6	389,078	16.7	2,326,377
Wyoming	67,449	35.2	12,953	6.7	29,309	15.3	191,732
*American Samoa	10,000	22.3	6,000	13.3	6,000	13.3	45,000
Trust Territory	-0-	0.0	-0-	0.0	4,410	100.0	4,410
District of Columbia	100,776	43.1	-0-	0.0	23,452	10.0	233,908
Guam	22,250	22.3	10,450	10.4	4,600	4.6	100,000
Puerto Rico	63,546	5.8	18,116	1.7	381,982	35.1	1,088,516
*Virgin Islands	20,000	40.0	4,000	8.0	4,000	8.0	50,000
Bureau of Indian Affairs	28,028	56.1	2,000	4.0	8,623	17.2	50,000

\*Estimated.

Table 7. Potential participation of local education agencies and pupils in NDEA title III compared to actual participation: Fiscal year 1972

State or other area	Number of local education agencies	Number of eligible local education agencies	Number of participating local education agencies	Percent local education agencies participating	Number of pupils in State	Number of pupils in eligible local education agencies	Number of pupils in participating local education agencies	Percent of pupils in participating local education agencies
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Alabama	17,525	15,823	9,807	61.9	47,943,329	46,612,977	39,340,985	84.3
Alaska	132	132	124	93.9	822,994	822,994	808,283	98.2
Arizona	29	29	15	51.7	81,623	81,623	57,569	70.5
Arkansas	293	293	71	24.2	510,146	510,146	268,629	52.7
California	387	387	317	81.9	459,904	459,904	413,173	89.8
Colorado	1,196	1,196	562	47.0	5,472,507	5,472,507	4,467,692	81.6
Connecticut	181	181	138	76.2	564,512	564,512	517,131	91.6
Delaware	169	169	71	42.0	666,867	666,867	400,518	60.1
Florida	26	24	21	87.5	135,013	135,013	123,847	91.7
Georgia	67	67	48	71.6	1,620,267	1,620,267	1,233,842	76.2
Hawaii	188	187	187	100.0	1,082,304	1,082,304	1,082,304	100.0
Idaho	1	1	1	100.0	182,957	182,957	182,957	100.0
Illinois	115	115	67	58.3	185,114	185,114	148,942	80.5
Indiana	1,146	1,146	875	76.4	3,379,982	2,379,982	1,713,110	72.0
Iowa	312	312	288	92.3	1,230,796	1,230,796	1,182,584	96.1
Kansas	452	452	163	36.1	652,529	652,529	420,208	64.4
Kentucky	311	311	186	59.8	475,096	475,096	426,938	89.9
Louisiana	200	200	189	94.5	663,718	663,718	653,021	98.4
Maine	69	69	56	81.2	839,989	839,989	726,694	86.5
Maryland	292	218	86	39.4	247,502	247,502	91,471	37.1
Massachusetts	25	25	25	100.0	922,051	922,051	922,051	100.0
Michigan	401	401	174	43.4	1,200,000	1,200,000	848,356	70.7
Minnesota	609	186	139	74.7	2,212,505	2,212,505	891,913	40.3
Mississippi	440	440	419	95.2	872,517	872,517	861,296	98.7
Missouri	168	168	129	76.8	549,179	549,179	398,260	72.5
Montana	618	492	432	87.8	1,129,734	1,129,734	1,088,326	97.6
Nebraska	710	650	159	24.5	173,712	173,712	87,319	51.5
Nevada	1,414	473	74	15.6	332,507	332,507	174,739	55.0
New Hampshire	17	17	14	82.4	116,520	116,520	115,690	99.3
New Jersey	157	157	84	53.5	165,658	165,658	127,085	76.7
New Mexico	602	602	134	22.3	1,584,667	1,584,667	993,428	62.7
New York	95	95	58	61.1	279,045	279,045	232,038	83.2
North Carolina	734	734	390	53.1	3,503,859	3,503,859	2,575,127	73.5
North Dakota	160	159	156	98.1	1,171,240	1,171,240	1,152,669	99.7
Ohio	343	343	120	35.0	144,419	144,419	97,139	67.3
Oklahoma	667	667	659	98.8	2,433,919	2,433,919	2,426,680	99.6
Oregon	646	646	389	60.2	566,857	566,857	505,620	89.2
Pennsylvania	370	370	43	11.6	498,686	498,686	384,530	77.3
Rhode Island	516	516	409	79.3	2,363,017	2,363,017	2,042,017	86.4
South Carolina	41	41	22	53.7	195,486	195,486	114,602	58.6
South Dakota	100	95	62	65.3	660,878	660,878	485,761	74.7
Tennessee	205	205	117	57.1	166,305	166,305	100,000	60.5
Texas	159	159	123	77.4	849,575	849,575	785,735	92.5
Utah	1,207	1,138	780	68.5	2,791,589	2,791,589	2,449,568	88.2
Vermont	42	42	40	95.2	305,739	305,739	304,544	99.6
Virginia	279	279	134	48.0	105,260	105,260	79,195	75.2
Washington	138	138	123	89.1	1,113,128	1,113,128	1,057,579	95.0
West Virginia	330	330	237	71.8	779,813	779,813	772,491	99.1
Wisconsin	57	57	57	100.0	411,796	411,796	411,796	100.0
Wyoming	444	444	386	86.9	999,921	999,921	916,544	91.7
American Samoa	59	59	48	81.4	91,034	91,034	86,874	95.4
Trust Territory	1	1	1	100.0	12,000	12,000	12,000	100.0
District of Columbia	1	1	1	100.0	35,246	35,246	35,246	100.0
Guam	1	1	1	100.0	143,471	143,471	143,471	100.0
Puerto Rico	1	1	1	100.0	25,676	25,676	25,676	100.0
Virgin Islands	1	1	1	100.0	697,410	697,410	697,410	100.0
Bureau of Indian Affairs		200	10	0.05	52,591	52,591	3,953	7.5

\*Estimated.